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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,475	10/01/2003	Timothy John Havens	GEMS 0220 PA	2474

27256 7590 10/21/2004

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SOUTHFIELD, MI 48034

EXAMINER
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VARGAS, DIXOMARA

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/605,475

Applicant(s)

HAVENS, TIMOTHY JOHN

Examiner

Dixomara Vargas

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/01/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities:
2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification fails to properly disclose the radio frequency shield is a superconductor and a first and second housing being integrally formed as a single housing.

### ***Drawings***

3. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

4. Claims 2-4, 15 and 16 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 2-4 are not further limiting because the

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said claims states that the shield is coupled to the housing encasing the support electronics, which is already stated in the independent claim 1. Claims 15 and 16 are not further limiting because said claims states that the shield is coupled to the housing encasing the support electronics, which is already stated in independent claim 13.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6, 8-17 and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Srinivasan et al. (US 5,543,711 A).

With respect to claims 1, 12 and 13, Srinivasan discloses an integrated electronic system housing (Figure 1, housings #16, #18 and #20) and magnet structure for an imaging system comprising (Figure 1, magnets #10): a housing coupled to a magnet structure, said housing containing imaging system structure for support electronics (Figure 1, housings #16, #18 and #20); a radio frequency shield coupled to said housing and preventing radio frequency interference of at least one receiver coil from said imaging system support electronics (Figure 1, RF shield #38 and RF coils #36, #40, #42, #44).

7. With respect to claim 2, Srinivasan discloses the shield (#38) is coupled within said housing (#20).

8. With respect to claims 3 and 15, Srinivasan discloses said imaging system support electronics is encased in said radio frequency shield (Figure 1).

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9. With respect to claims 4 and 16, Srinivasan discloses wherein said radio frequency shield is coupled within said housing and encases said imaging system support electronics (Figure 1).

10. With respect to claim 5, Srinivasan discloses wherein said imaging system support electronics comprises at least one of a radio frequency amplifier, a gradient amplifier, a timing device, an oscillator, a radio frequency transmitter, a gradient coil controller and a sequence controller (Column 4, lines 33-40).

11. With respect to claims 6 and 17, Srinivasan discloses wherein the radio frequency shield comprises at least one layer (Figure 1).

12. With respect to claims 8-11 and 19-20, Srinivasan discloses the radio frequency shield is metallic, conductive mesh or a superconductor having at least one void (Column 4, lines 16-18).

13. With respect to claim 14, Srinivasan discloses a second housing (Figure 1, #16) containing said magnet structure (#10), wherein said first housing and said second housing are integrally formed as a single housing (Figure 1, housings #16, #18 and #20).

14. With respect to claim 22, see rejections of claims 1 and 14 above.

### ***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan et al. (US 5,543,711 A) in view of Ladebeck (US 5,994,903 A).

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With respect to claims 7 and 18, Srinivasan discloses the claimed invention as stated above in paragraph 6 except for the at least one layer comprising: a first layer; and a second layer coupled to the first layer; said first layer and said second layer having capacitance therebetween. However, Ladebeck discloses at least one layer comprising: a first layer; and a second layer coupled to the first layer; said first layer and said second layer having capacitance therebetween (Figure 2, capacitors #13). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Ladebeck's shielding structure including capacitors with Srinivasan housing for the purpose of short the shield for compensating the magnetic field as shown by Ladebeck (Column 3, lines 50-55).

### ***Conclusion***

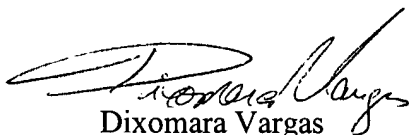
17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional prior art cited in PTO-892 discloses MR systems with RF shielding.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dixomara Vargas whose telephone number is (571) 272-2252. The examiner can normally be reached on 8:00 am. to 4:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dixomara Vargas  
Art Unit 2859  
October 17, 2004



Diego Gutierrez  
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**CHRISTOPHER W. FULTON**  
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